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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/786,646

04/26/2001

Walter Keller

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3845

7590

12/01/2004

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EXAMINER

JUNTIMA, NITTAYA

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,646

Applicant(s)

KELLER, WALTER

Examiner

Nittaya Juntima

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/2/01, 3/7/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because the labels in Fig. 13 need to be fully spelled out to avoid any confusion, i.e. "MW" is a multimedia workplace. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following:

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- The abstract as required by 37 CFR 1.72(b) is missing. An abstract on a separate sheet is required.

- Paragraph 0032, ll 1, "s a" should be changed to "as."

Appropriate correction is required.

Claim Objections

3. Claims 1, 4, 12, and 14 are objected to because of the following informalities:

- in claim 1, ll 2, "communication networks" should be changed to "communications network" since there is only one mobile communications network shown in Fig. 1 and to be consistent with claims 5 and 15-17;

ll 7, "user side" should be changed to "user's side;"

ll 9, "having" and the space thereafter should be deleted;

- in claims 4, 12, and 14, phrases inside the parenthesis, for example "(single or multiple connection)," should be changed or deleted as they are not considered as claim limitations and therefore will not be given patentable weight.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding method claims, claims 1-20 are rejected as vague and indefinite since there are no positively recited method steps in the claims for defining an actual process for the method. Proper recitation for method claim shall list a series of method steps in clear and concise language. See *Ex parte Erlick*, 3 USPQ 2d 10011 at 10017 [6].

In addition, claims 1-20 contain numerous antecedent basis problems and unclear recitations apparently resulting from translation. The intended limitations of these claims therefore cannot be distinguished with accuracy. For example, the phrases "for example," "such as," and "the like" in claim 1 render the claim indefinite, the phrases "this invention" and "the invention" in claims 3, 6, 10-11, 13, and 18-20 are vague and indefinite, "the present data stream" in claim 1 lacks antecedent basis. Applicant is advised to carefully review the claim for full compliance with 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-2, 7, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakoda et al. (USPN 6,088,345).

Per claim 1, Sakoda et al. teach a method characterized by having the functional unit on the user's side (a terminal apparatus shown in Fig. 10) as well as the functional unit on the side of the core network (a base station shown in Fig. 2) equipped in such a way that they are capable of recognizing particular applications (audio, facsimile image, and electronic mail) within multimedia data streams (data strings of audio, facsimile image, and electronic mail data transmitted simultaneously in one frequency band are collectively multimedia data streams, col. 10, ll 5-35 and col. 12, ll 1-19), depending on their direction, by means of suitable parameters including indicators (control data, col. 4, ll 1-21 and col. 5, ll 32-36), and to separate them accordingly, to transmit them separately (on the transmission from the terminal apparatus to the base station, different types of data strings, e.g. audio, facsimile image, and electronic mail data, are separated and transmitted separately in their respective group of subcarriers, Fig. 10, col. 4, ll 1-37, col. 10, ll 5-35, and col. 12, ll 1-9), and to re-assemble them (at the base station, data are demodulated into the demodulated reception data, Fig. 2 and col. 5, ll 1-21, see also Fig. 7).

Per claim 2, Sakoda et al. teach that a data-specific separation (transmission of multi carrier signals), which manages particularly to overcome an air interface for the purpose of optimal use of frequency resources (a predetermined frequency band) and to obtain optimal transmission quality of individual applications within a multimedia application (preferable transmission conditions). See col. 10, ll 5-65.

Per claim 7, Sakoda et al. further teach that the functional unit on the user's side (a terminal apparatus, Fig. 10) as well as the functional unit on the side of the core network (a base

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station shown in Fig. 2) communicate with each other by means of appropriate methods, preferably by inband signaling (a signal requesting to set another transmission channel is transmitted using a part of the predetermined transmission channel), such that the needs of an optimized data transfer via various transmission channels between the functional units are met (col. 12, ll 34-45).

Per claim 11, Sakoda et al. teach that the method may be used by appropriate action on the part of a network provider in allocating channels for dynamic load distribution and load optimization of alternative transmission channels (channel allocation of transmission channels, col. 12, ll 46-65).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 8-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda et al. (USPN 6,088,345).

Per claims 3 and 13, Sakoda et al. further teach that the data stream (data strings of different types of data) that was separated according to data structure (multi carrier system) is re-assembled (demodulated) after the optimized parallel transmission (transmission of multi carrier signals) into the original data stream (the demodulated reception data). See col. 5, ll 1-21, col. 10, ll 5-48, col. 12, ll 20-33, and Fig. 9B).

However, Sakoda et al. do not explicitly teach that the optimization transmission is transparent to the user.

However, Sakoda et al. mention that preferable transmission conditions are maintained while the multi carrier signals are carried out, col. 10, ll 36-65. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include that the optimization transmission is transparent to the user because one would not notice a change in the transmission conditions when the preferable transmission conditions are maintained.

Per claim 8, Sakoda et al. fail to teach that the functional unit on the side of the core network provides an additional service to the user by optional conversion of the data stream from the user into other standardized multimedia or protocol forms and to transmit them through alternative pathways as needed.

However, Sakoda et al. disclose that the base station transmits the demodulated reception data to a communication control station via an exclusive line 57 (col. 5, ll 16-21). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Sakoda et al. to include having the functional unit on the side of the core network to provide an additional service to the user by optional conversion of the data stream from the user into other standardized multimedia or protocol forms and to transmit them through alternative pathways as needed as recited in the claim. The suggestion/motivation do so would have been to accommodate a situation where there are more suitable/efficient protocol forms for transmission over alternative pathways to the communication control station or in a case where either the control station or the line 57 is not operating.

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Per claim 9, Sakoda et al. fail to teach that at least the functional unit on the side of the core network is optionally equipped to handle appropriate routing and signaling mechanisms to transmit application or data structure specific parts of multimedia data streams via various transmission networks.

However, Sakoda et al. teach transmission of a plurality of types of data such as audio, facsimile, and electronic mail data using a multi carrier system from a terminal apparatus to a base station (col. 10, ll 5-35). Therefore, it would have been obvious to one skilled in the art to include having at least the functional unit on the side of the core network optionally equipped to handle appropriate routing and signaling mechanisms to transmit application or data structure specific parts of multimedia data streams via various transmission networks into the teaching of Sakoda et al such that different data type would be properly signaled and routed to its destination.

Per claim 10, Sakoda et al do not teach that the claimed method may be used in fixed network systems in like manner as needed. However, it would have been obvious to one skilled in the art at the time the invention was made to apply the claimed method in fixed network systems as such application involves only routine skills in the art.

Per claim 12, Sakoda et al. fail to teach that the method may be used by appropriate action on the part of the user for a customer-specific selection and choice method in as many areas as possible, including services used and quality of services.

However, Sakoda et al. teach that the user at the terminal apparatus is allowed to transmit different types of data supplied from different data processing apparatuses, col. 12, ll 1-9, and preferable transmission conditions are maintained, col. 10, ll 55-65. Therefore, it would have

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been obvious to one skilled in the art to modify the teaching of Sakoda et al. to include appropriate action on the part of the user for a customer-specific selection and choice method in as many areas as possible, including services used and quality of services in order to appropriately inform the system of user requirements on the types of data to be communicated and their quality levels.

9. Claims 5 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda et al. (USPN 6,088,345) in view of an art of record (WO 95/18491).

Per claims 5 and 15-16, Sakoda et al. fail to teach a functional unit on the user's side as well as a functional unit on the side of the core network, which are designed such that a permanent method for updating to new methods and protocols as recited in the claims is possible.

However, the art of record teaches that a data communication device is designed in its software modules for microprocessors (firmware) such that an update of partial functions is provided wirelessly which allows for a permanent method for updating new methods and protocols (firmware, which must include protocol, conversion, and algorithm-specific components, is updated wirelessly, Abstract, Fig. 1, page 10, ll 31-page 11, ll 1-10).

Given the teaching of the art of record, it would have been obvious to one skilled in the art at the time the invention was made to modify the functional unit on the user's side as well as a functional unit on the side of the core network to be designed in their protocol, conversion, and algorithm-specific components preferably as software modules for microprocessors in such a way that an update of partial functions as needed via the mobile radio communications network is possible, which thus allows for a permanent method for updating to new methods and protocols as recited in the claim. The motivation/suggestion to do so would have been to enable

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software updates to be provided to the user wirelessly as taught by the art of record (page 11, ll 6-10).

10. Claims 6 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda et al. (USPN 6,088,345) in view of an art of record (WO 97/26739).

Per claims 6 and 18-19, Sakoda et al. fail to teach having an optional connection between the network functional unit and a CCBS of a network operator as recited in the claims.

However, as shown Fig. 1, the art of record teaches a connection between a base station (BSC) and a CCBS (a billing gateway support node BGGSN) of a network operator (operator 1) for the billing of offered services and a creation and verification of use by a single user (BGGSN receives user-specific charging information and forwards charging information to a charging system which must inherently include creation and verification of use by a single user, Abstract and page 8, ll 6-page 9, ll 1-3).

Since the network functional unit (a reception system of a base station shown in Fig. 2, col. 4, ll 66-col. 5, ll 1-21) of Sakoda et al. is located at the base station and given the teaching of the art of record with a connection between a base station and Customer Care and Billing System, it would have been obvious to one skilled in the art when the invention was made to include having an optional connection between the network functional unit (the reception system of the base station) and a CCBS a network operator for the billing of offered services and a creation and verification of the use covered by the method by a single user. The motivation/suggestion to do so would have been to provide charging information as taught by the art of record (Abstract).

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Allowable Subject Matter

11. Claims 4, 14, 17, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

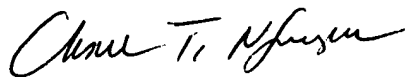
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
November 24, 2004

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